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EDWARD WINSLOW-SPRAGGE

A TRUE CANADIAN

HIS WORK IN MUNITIONS

Taken from "THE LINK" a Biography of Edward Winslow-Spragge  
written by his Wife, Lois S. Winslow-Spragge.

PART 1 1914-1918

L.W.S used personal letters  
written to & from E.W.S as well as  
other printed material among his reports etc.

War and Munitions.

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"Give us the tools, and we'll finish the job."

In November 1916 the following article appeared in the London Times:- "A luncheon was given by the Parliamentary Association in the House of Commons to meet Hon. Sir. Thomas White, Canadian Minister of Finance. Mr. McKenna presided, and proposed the toast to Canada and the war. He said, "When war broke out, there was one fact which was never in doubt, the solidarity of the British Empire, however, he must confess that he had been astonished by the power of the Dominions. Who could have believed that at the beginning of the war, that Canada was to develop a power of munitionment far beyond anything that any country in the world, outside Germany, had known? Who could have believed that Canada, for internal developments, who had found it necessary to borrow money in the Money Market of London, was to become not a burden, but an aid to the Mother Country? Who would have thought that Canada which was now approaching towards the ideal of contributing half a million men to the army, would end by sending out from her shores, more soldiers than this country sent to South Africa in the course of three years campaign? Yet all this had been done under our eyes, and we had found in our Dominions a most perfect support for our old age."

This letter would never have been written had not Edward Winslow-Spragge and other courageous Canadians manufactured munitions in Canada, and lacking any previous experience, somehow they produced them, and shipped them to the men behind the guns.

July 1914. The air was full of the rumours of war. Everyone was apprehensive, and the men declared defiantly, "that if war should come, six weeks would put the Kaiser and his army where they belonged, and that he would pay dearly for starting an unwanted war!"

Edward Winslow-Spragge was with the Canadian Ingersoll Rand Company, and they took a serious view of things. They recalled Edward from his summer holiday with the following telegram.

August 18, 1914. "Important business has developed, want you Montreal first train."

September 1, 1914 WAR WAS DECLARED!

Edward Winslow-Spragge was to waste no time in rushing to Britain's aid. His reasons were twofold. The following poem which he wrote while returning from England demonstrates his love for the Mother Country.

"England Farewell"

With misty eyes I leave thy hallowed shore  
A year, a day, a century has flown  
Before my wondering eyes;  
What doth the future hold in store  
For you, dear country, Mother of mine own?  
While I a compound of much love and care  
Return to Canada,  
What can I do to pay one half I owe?  
One thing I know  
We have a noble heritage.  
And in the vast vast land to which I go  
There will be friends to listen to my tale  
However weakly told  
And listening, will ever with me sow  
The Love of England.

Edward's other reason was to save Canada. At this time Canadian industries were suffering from a period of severe depression. Certain undertakings that were already underway were being completed, but practically no new enterprises were starting up. The volume of business was small, and values of all securities had fallen. H.H. Vaughan of the C.P.R. stated, "This condition was due on account of a general reaction following a period of great development." The general sentiment was decidedly pessimistic.

Shortly after War was declared, Mr. Sangster, Works Manager of Canadian Ingersoll Rand, Sherbrooke, P.Q. announced that the 'shop' was faced with a 'shut down'. He came to Edward Winslow-Spragge and asked him if he thought it would be feasible to try to get an order for making shells, and then to approach the mammoth task of manufacturing them. It took men of great vision to even contemplate such a task, but even though no shells had ever been made outside an arsenal, they both determined to try.

August 28th. found Edward Winslow-Spragge calling on Col. Benson, Master General of Ordnance, in Ottawa, and suggesting to him that Ingersoll Rand Co. could and would make shells. Col. Benson must have been puzzled as to what to reply, because he knew that the only place that could handle such a requisition was the Dominion Arsenal, whose production, at the time, was about 75 shells a day, or 350 a week. At this point Col. Benson fished out from under some papers a requisition from the War Office, London, for 100,000 18 Pdr. shells, which order, making them at the rate the Arsenal was capable of, would have taken 5½ years to complete.

A few words here about the Quebec Arsenal. Many have, no doubt, visited this arsenal before war was thought of, and smiled at the conditions under which the work was performed, but nevertheless, it knew how such work had to be done, it knew the methods and difficulties, and was actually producing ammunition though in small quantities. No doubt shells would have been manufactured in Canada for the First World War, had there been no arsenal but they certainly could not have been produced as quickly or as economically without the information obtained at the arsenal, and to F.D. Lafferty, the Superintendent at that time, the Munition Manufacturers owe a deep debt of gratitude. He gave his time and able assistance unstintingly.

Edward Winslow-Spragge seized the above mentioned requisition for 100,000 18 Pdr. shells, and told Col. Benson that his company, and other Canadian shops could, he felt sure, perform the work. The M.G.O. showed mild credulity that it would be at all possible for any manufacturers to imitate the work of the Dominion Arsenal, nevertheless the order was urgent. It was then arranged that Edward would visit the Arsenal at Quebec, and a letter of introduction was given him, requesting that all information regarding 18 Pdr. shells should be given to him. Edward said, "The Superintendent granted me quick access to the Arsenal, and very little time was lost in learning how to make 18 Pdr. shrapnel." Edward brought away with him a full set of 18 Pdr. drawings and detailed cost of each operation. This took place Monday, August 31st. On Tuesday September 1st. a conference took place at Sherbrooke, in the Ingersoll Rand office, at which time a suitable price for shells was estimated, provided materials could be obtained at arsenal prices.

Edward writes, "Subsequent to my visit to the Dominion Arsenal, Col. Hughes turned down my bid to manufacture 18 Pdr. shells." Col. Hughes stated that "All manufacturers must be given a fair chance." and then sent dozens of telegrams announcing a conference with the Minister of Militia on September 2, at 10.30 o'clock.

Sam Hughes failed to keep his appointment with the manufacturers, to the annoyance of all who had assembled as a result of receiving his telegram. After coming to Ottawa, and waiting from 10 am to 4 pm most of the manufacturers thought they had come on a fool's errand, most were in a bad humour, many fruitless discussions took place, the meeting became disorderly, and all stood ready to leave. Instead of rushing to secure orders, everyone seemed timid, and most of the talk was about getting a big and still bigger price for the munitions. "So much was this the case," wrote Edward, "that I feared to propose my scheme of a Manufacturers Committee lest Col. Benson might have misinterpreted it as a direct attempt to create an unfair price."

Finally at 4 pm. those manufacturers who had stayed on hand were ushered into the office of the Minister of Militia. He sat behind his desk in his shirt sleeves. Col. Hughes read the cablegram enquiry for 100,000 18 Pdr. shells (shrapnel). Those present were then asked to go up with Col. Benson and discuss the proposal in detail. Many still thought they were on a wild goose chase. However, Edward Winslow-Spragge was called, and he proposed, seconded by Goldie McCulloch, that a Shell Committee be formed with Col. Bertram as chairman. The motion was passed unanimously. Bertram left the room with Col. Benson to obtain the Minister's approval. The minister approved.

Note: On the above point, Mr. Goldie writes, "Mr. Winslow moved that Col. Bertram be our Chairman on further negotiations, and I am quite sure that I seconded the motion, not Mr. Famlton of Canadian Machinery, as stated in the history of munitions." Goldie again writes, "Col. Lafferty addressed the continuing meeting, explaining what was required and described the shell that we were talking about! After the Colonel's description, a discussion ensued as to whether we could take the job or not. "As far as I remember, the only one present that was quite positive about it was Mr. Winslow, so much so in fact, that he offered to take on the whole job for his Company."

Col. Bertram, in agreeing to act as Chairman, immediately said, "Yes, we can get Cantlie of N.S. Steel and Coal to make us steel forgings, we can get C.G.E. to make parts, meaning copper and brass parts. We can get yourselves and Goldie McCullough and our firm and a lot of others to do the machine work. This idea and the carrying out of it, whereby the Shell Committee dealt directly with the maker of each individual part, had more to do with the remarkable progress made in shell manufacture in Canada than any other thing. We believe this plan had never previously been used in any other country." British officials expressed wonder that such a scheme could be carried out without incessant friction.

From the records, it is apparently evident that the appointing of the Committee, including the members of the manufacturers, was done by the great Sam Hughes at Valcartier.

Edward Winslow-Spragge writes: the first members were as follows:-

Col. Bertram	Chairman representing machinery manufacture
Col Cantlie	of N.S. Steel " forging manufacture.
Mr. Watts	of C.G.E. component parts "
Col. Benson	M.G.O.
Major Lafferty	Supt. of Dominion Arsenal
Col. Marston	Chief Inspector of Arms and Ammunition.

The price suggested at the meeting for 18 Pdr. was Arsenal costs, \$6.95, plus 15% for inexperience, plus 10% profit. The final price decided on was \$8.44. Later the price dropped as low as \$2.95.

Each different shell has some definite function to fulfil, and is designed for that purpose. For field or artillery operations, the shrapnel and lyddite are the two principal types used. Of these, shrapnel is the most prominent, because of its enormous destructive power. The shrapnel shell was invented in 1784 by Lieut. Henry Shrapnel, and was adopted by the British Government in 1808. A shell is an intricate affair to make, having to pass inspection for bore, finish, base, fuse, hole, profile, length, thickness, and at least 19 different gauges are used, 27 steps in all.

Shells were produced in Canada months before similar concerns produced in Great Britain of the U.S.A.

Edward Winslow-Spragge writing to his General Manager on Oct. 15th. says, "It is worth pointing out that of all the dozen countries manufacturing shells today, in not one of them, except Canada, have orders been placed by a Committee, principally composed of members personally interested in making shells. At this present time, the Shell Committee is considering proposals from us aggregating \$6, 873,000 and added to this, we will presumably do a business of between \$2,000,000.00 and \$3,700,000.00 in 18 Pdr. during the coming year."

At the commencement of making shells, heat treatment was a troublesome problem. In reality Heat Treatment was only a theory. There was some heat treating equipment in a few shops, but the exactitude that was needed for a shell was not demanded. A shell had to have a tensile strength etc., and these qualities could only be obtained with steel of the proper composition, heated in a certain way. H.H. Vaughan, in an address to the Engineering Institute, stated, "Excellent service was rendered by Mr. W.A. Patterson, then Shop Engineer for the C.P.R., and also Mr. E.S. Winslow of Canadian Ingersoll Rand Co., the latter being, I believe, the first man to introduce into regular use the magnetic detector to determine the point of critical temperature of steel."

The Department of Munitions wanted 10,000 shells a week, the Arsenal was making 350. Canadian Ingersoll Rand claimed their capacity to be 12,000, which was considered a very large claim. During the first two weeks of November 1914, 600 a week were made, January 15, 1915 showed weekly acceptances of 2,517. In December of 1917 the figures for shrapnel showed:

December 8th.....	17,852
" 15th.....	21,678
" 22nd.....	25,350
" 29th.....	17,532
	<u>82,412</u> for one month.

By that time, 8" shells were also being made, the following figures show the production of these shells, in the same month as the shrapnel above.

December 8th.....	4,000
" 15th.....	5,125
" 22nd.....	1,000
" 29th.....	4,124
	<u>14,249</u>

9.2 shells were also being made at a price of \$29.99 each. Edward says, "We are officially credited with the largest production in Canada of 8" high explosive shells, the second largest production of 18 Pdrs. shrapnel, in addition to many thousands of 6" and 75 mm. shells for the British and American Governments."

"During the war we developed and manufactured for the U.S.A. several hundred ship winches, these machines were outstanding, and many of their special features are now being used in our air and steam operated mine hoists. We also built marine buoys, marine boilers and 900 marine engines."

The first order to the Rand shops to make shells was October 28, 1914. The first shipment, December 23, 1914. They completed their first 100,000 shells by June 22, 1915. Over 500,000 shells had been delivered by March 1917, when no more orders were forthcoming.

In March of 1915 two hundred factories were engaged in munitions with 100,000 workers. The Ingersoll Rand were employing about 5,000 workers, the Angus Shops about 10,000 employees. H.H. Vaughan says, "I am violating no confidence in saying that the two plants obtaining output so quickly were the Canadian Ingersoll Rand and the C.P.R. Angus Shops, who practically ran neck and neck the first few months." The Dominion Steel Co. was taxed to capacity, the steel required from November of one year to the close of the following year was 800 million pounds.

In April of 1915, the following letter came to Edward W-S. from his manager, Mr. Gilman, "I have pleasure in according you the position of "Manager of Munitions." This position will carry with it a compensation of \$3,400.00."

Edward was now a young man of 29, Chief Inspector, as well as Manager of Shell Works for Ingersoll Rand. In April of 1915 he received the following letter.

Dear Winslow,

I am in receipt of your letter of the 13th. instant and in the event of my being in Sherbrooke in the near future shall avail myself of the pleasure of a visit to your Works.

Let me congratulate you on the splendid showing made by your Firm.

Faithfully,  
Sam Hughes.

Edward writes later;- "Any memos which may happen to exist to show the manner in which the redoubtable Sam Hughes overruled all objections to Canadian participation in munitions manufacture would probably have been suppressed by the governments of both Britain and Canada, because Hughes methods were inflammatory...but however rough were his methods, they were the spark-plug which produced action, largely against the advice of experts and the inclination of more conservatively minded ministers and officials in both England and Canada."

The inspection of shells was found to be one of the major headaches. Edward says, "The eternal inspection is now the only fly in the ointment, they are the most unreasonable autocrats imaginable, and because they are autocrats they cannot learn except by accident. Consequently if the War goes on another year or two, either the inspectors will probably be lodged in an insane asylum, or else their victims will collapse first.... Our inspection of shells was considered the best in the country, and aided us in the very good performance we made. "

Another great difficulty was the continual falling off of men for enlistment. Recruiting officers felt it their duty to go into the plants when possible. In some instances key men were not permitted to leave, but the following story will illustrate what happened all too frequently. A recruiting officer asked a manager in Ontario if he could address the company employees. The manager consented, with this restriction. "I have 9 skilled men and 27 unskilled, you can take all the latter, but, for goodness sake, leave me the 9 skilled workers." After the address, 7 skilled men came forward and only 2 unskilled.....that was the way it was!

December 2, 1915. from the Ottawa Citizen.

" Up till this date, the Imperial Government has placed orders in Canada to the amount of approximately \$300,000,000. This represented such a great volume of business, that it was considered desirable to form a Board directly responsible to the Imperial Ministry of Munitions. The operations of the Shell Committee were therefore passed over to this Board. Thus the Board was formed with Mr. K. W. Flavelle, well known in the Canadian Business World, as Chairman. The most satisfactory thing regarding the change was the fact the unlike the late Shell Committee, which was a department of the Dominion Government, the new Board was appointed entirely on the responsibility of the British representatives in Canada. Canadian private manufacturers should well be satisfied with the personnel of the new Board.

At the conclusion of the War, the Mining Bulletin writes, "Mr. Winslow, at the outbreak of war, did much to initiate the manufacture of munitions in Canada, taking charge at Sherbrooke as Chief Inspector, etc." Engineering and other magazines all speak of his work as playing a very important part in the development of Munitions.

Col. David Carnegie, who came from England, and who by his presence and advice on Ordnance affairs, gave such confidence writes in one of the Ottawa papers, "I had interviews with both Earl Kitchener and Rt. Hon. David Lloyd George, and they spoke with praise and appreciation of the work done by the Canadian Manufacturers through the efforts of the Shell Committee and the Imperial Munitions Board. It has been a great surprise to all in the Old Country to observe the skill and ingenuity of the Canadian manufacturers, and to note particularly the harmony with which they have done their work."



They were amazed at the growth of output in such a short period, and the excellent quality of work produced. "Earl Kitchener particularly wished me to convey to General Sam Hughes his high appreciation of the work he has done in connection with the shell operations, and in raising an army of fighting men, whose work at the front he gave the highest praise."

Though it was a great satisfaction to Edward Winslow-Spragge to be ever accelerating the production of shells, still he wanted to go overseas and be with his brothers and friends. From the beginning, when he and Mr. Sangster had conceived the idea of manufacturing shells outside of the Arsenal, he had spared no effort. In fact, too much of his energy and strength were put forward. In 1915 he writes to his Father, "I feel by continuing my work for the coming year, I can be of best service to my country, if I did not feel this, I should leave at once. I have now got pretty full control of all munition work, however, there seems a good deal more for me to do before I can think of enlisting myself. Pick McConkey is in the same boat, both behind in our deliveries, and the Board insists that we are greatly in need of big shells. We have just offered a bonus to the shell Superintendent for every shell he can turn out before December 31st. to relieve me of some of the work of hammering for results..."

In 1915 Edward was pleased to receive recognition from his manager, Mr. Gilman, and in thanking him he wrote: "I am gratified to receive your gift, and to learn that you consider my work useful. I can truthfully say that my whole heart has been in this work from the start, but with your letter, I can go forward with greater confidence, and I hope that the results will more than equal your expectations."

February 1916. Edward was advised to take a rest and holiday, the Doctor found him worn out, and diagnosed a 'tired heart.' So much pressure, and such accomplishment was bound to take its toll. Mr. Gilman wrote as follows: "The Doctor tells me you have been using up too much nervous energy. I myself have been afraid of this, for you have carried not only the excitement and load of your work, which has been that of three men, but also the strain of your wife's illness at home. Let us take warning, let us not get so excited about the shell business, let us do our best, our very best, but let it end there. We must not try to carry abnormal burdens."

In June 1916 the following communication came to the Company from Allan McAvery, Superintendent of Production, Imperial Munitions Board. It was addressed to all machiners and assemblers.

Gentlemen: Will you kindly make known to your staff generally that the constant flow of munitions is a necessity to the carrying on of the war. The Imperial Authorities, responsible for the success of military operations, require faithful performance in this respect by the man behind the man behind the gun. We feel sure that no one will begrudge working overtime when necessary, and to eliminate holidays while the war is on. Each night gang should put in 6 nights a week, and each day gang the full 60 hours a week. We do not encourage work on Sundays, except for necessary repairs.

In 1917 , people were being rationed for all the important commodities, and coupons had to be used for tea, coffee, sugar, butter and meat. Some humorous friend sent Edward this poem, called The Hymn of Hate, which expressed many peoples feelings at that time.

My Tuesdays are wheatless,  
My Wednesdays are meatless,  
And I grow more eatless each day.  
My house, it is heatless,  
My bed, it is sheetless,  
They are all given out to the Y.M.C.A. (Red Cross)  
The bar it is treatless  
My coffee is sweetless  
I daily grow thinner and wiser  
My socks they are feetless  
My trousers are seatless,  
Great Scott! how I do hate the Kaiser.

In 1917 Edward was still desirous to enlist, and in May, his Father writes from Winnipeg, "My very dear Edward: I sympathize fully with your wish to offer yourself, and I have no thought of opposing. The prospect of getting work in the Canadian Army does not seem very good for you. I, like you, turn to the British Army or Navy. I wrote to Sir Frederick and he referred to the superfluity of Canadian Officers. He said he would be glad to have you call on him, and he would be glad to help you in any way."

The following notes were written by Edward on May 2, 1917, and found with a certificate of rejection for unfitness for Service in the Overseas Expeditionary Force. "I presented myself before the Medical Board, I believe I was called "Manager of Munitions Department" at that time. I have not looked up the dates, but I think at or about that time, we were at the peak of our Shell Production, and in case I were likely to be needed for Military Service, we would have wanted a certain amount of time to prepare ourselves. Moreover I was torn between two urges, (A) To continue the Shell Work, of which I was the Father, or at least one of the Fathers, or (B) To Enlist and join all the friends of my McGill year, Science '08, overseas. I requested an unbiased examination and report, which the two officers on duty immediately seemed to make as a routine job....."

The War eventually came to an end in 1918, and there were many settlements to be made with the Munitions Board. It was necessary for the Ingersoll Rand, as well as all other companies to present their claims forcefully and intelligently. The President of the American Rand writing to Edward says, "I think the entire matter should be left to your best judgment. I think a group of three might be more impressive than one, sometimes two heads are better than one, and sometimes three are better than 2, that is, if they are the right kind of heads...but whatever you do, you should be the spokesman."

With the assurance that I have every confidence in your ability to make an intelligent and dignified presentation of your company's case, and with the best wishes for satisfactory results, I remain

Yours very truly, George Doubleday. (New York)

Later...April 17th., from George Doubleday.

"Please accept my congratulations on the result of your interview with the Ottawa people. I am very glad I kept out of it, as a matter of fact, I am always glad to keep out of anything when I feel that someone else can handle it better." G.D.

A message from Churchill to the Munitions Board. "You have carried through a work of greatest magnitude with uniform success and efficiency, and I wish to pay my personal tribute to the great ability and energy and organizing power...etc. As the Board was appointed by me when I was Minister of Munitions, it is particularly pleasureable to me to recognize the success and efficiency and value of its work, and to thank you, your Staff, and the Canadian Manufacturers, and the great army of workers who have so splendidly assisted you, for the great services so rendered."

Winston Churchill.

Much of the aforesaid information to do with the War, together with fuller details, was sent to Sir Wilfred Campbell, Historian of the Imperial Munitions Board, by Edward. Sir William, writing to thank him says, "I thank you very much for the very fine statement you have sent me of the history of your Plant, and its connection with the whole Shell Committee, and the early work of munitions, this is one of the best bits of information I have received regarding the early days of Munition Work in Canada. Your Firm has certainly done its part."

In one of H.H. Vaughan's addresses, he says, "I do not believe it is properly appreciated, the magnitude of the original venture undertaken by Col. Bertram and the Shell Committee, the amount of hard earnest work it required, and the ability with which it was executed. The whole development of munition work in Canada grew from the satisfactory execution of those preliminary orders, and Gen. Bertram and his confreres deserve the greatest credit and recognition for their success, and gratitude of every Canadian for the employment it afforded, and the assistance it rendered to our Armies overseas.

Thus Edward Winslow-Spragge's twofold purpose was achieved. His beloved Britain was spared, and employment saved Canada from a severe depression.

A letter written by Edward on January 3, 1916 to Sir Alexander Bertram:

Dear Sir Alexander,

I want to be among the first to congratulate you, I am delighted to see your name in the Gazette as one of those honored at the opening of the year.

I happened to suggest the idea of a shell committee, and it was my good fortune to nominate you as Chairman. In looking at the tremendous work now being done in shells in Canada, people forget that dreary September day, when we spent 4 hours waiting to see the Minister of Militia about what many people thought was a fool's errand, and people also forget that Canadian firms actually commenced production many months ahead of similar sized American and British firms.

The invitation to the manufacturers came, as it were, out of a blue sky. The proposition when we saw it, was one that might have been shirked. In fact, the whole thing could have come to very little indeed, if, underlying all other motives, there had not been for everyone a real desire to do what we consistently could to help the Cause...a real desire to do so. But, 'our bit' would have been very small, if it had not been for your organization. Firms went in because they had faith in your word, and spent money to enlarge because they had confidence that you would continue to give them a square deal. The idea of getting component parts from widely separated points had never been tried, and was the wonder of visiting British experts. It was a tremendous task, and has been successfully handled.

The manufacturing industries have made a big step forward in the strength and self-confidence this work has given them. A year ago, not one of them would have tackled the present contracts for large shells, and for this 'building up' we have you in a very large measure to thank.

We are glad to feel that Canadian Munitions are equal to the highest standard of the Imperial Service. If we live up to that standard, our work will not stop with the War.

With best wishes for a happy and prosperous New Year.

Yours very truly, Canadian Ingersoll Rand Company.

Winslow, Manager of Munitions Department.